

## **ABSTRACT**

The viral Macrophage Inflammatory Protein-II (vMIP-II) is a chemokine that interacts with the CC and CXC chemokine receptors, including the CCR5 and CXCR4 chemokine receptors. CCR5 and CXCR4 are the principal coreceptors required for cell entry of human immunodeficiency virus type 1 (HIV-1). The present invention describes a peptide fragment of the vMIP-II that prevents the HIV-1 virus from interacting with the coreceptor CXCR4, thereby preventing viral infection of that cell. These peptide fragments will serve as lead compounds for the development of therapeutic agents against HIV-1 infections.